CLAIMS

What is claimed is:

1. A triphone preselection cost database for use in speech synthesis, the database generated according to a method comprising:

1) selecting a triphone sequence $u_1 - u_2 - u_3$;

2) calculating a preselection cost for each 5-phoneme sequence $u_a - u_1 - u_2 - u_3 - u_b$, where u_2 is allowed to match any identically labeled phoneme in a database and the units u_a and u_b vary over the entire phoneme universe; and

3) storing a group of the selected triphone sequences exhibiting the lowest costs in a triphone preselection cost database.

2. The triphone preselection cost database of claim 1, wherein storing the group of selected sequences comprises:

a) determining a plurality of N least cost database units for the particular 5-phoneme context;

b) performing the union of the N least cost units for all combinations of u_a and u_b;

c) storing the union created in step 4) in a triphone preselection cost database; and

d) repeating steps 1) – 3) for each possible triphone sequence.

3. The triphone preselection cost database of claim 1, the method for generating the database further comprising generating a key to index each triphone in the database.

4. The triphone preselection cost database of claim 2, wherein a plurality of fifty least costs sequences for any possible 5-phone context are stored.

5. The triphone preselection cost database of claim 1, wherein the preselection cost is the target cost or an element of the target cost.

6. A computer-readable medium storing a triphone preselection cost database for use in speech synthesis, the database generated according to a method comprising:

1) selecting a triphone sequence $u_1 - u_2 - u_3$;

2) calculating a preselection cost for each 5-phoneme sequence $u_a - u_1 - u_2 - u_3 - u_b$, where u_2 is allowed to match any identically labeled phoneme in a database and the units u_a and u_b vary over the entire phoneme universe; and

3) storing a group of the selected triphone sequences exhibiting the lowest costs in a triphone preselection cost database.

7. The computer-readable medium of claim 6, wherein storing the group of selected sequences comprises:

a) determining a plurality of N least cost database units for the particular 5-phoneme context;

b) performing the union of the N least cost units for all combinations of u_a and u_b;

c) storing the union created in step 4) in a triphone preselection cost database; and

d) repeating steps 1) – 3) for each possible triphone sequence.

8. The computer-readable medium of claim 7, the method for generating the database further comprising generating a key to index each triphone in the database.

9. The computer-readable medium of claim 7, wherein a plurality of fifty least costs sequences for any possible 5-phone context are stored.

10. The computer-readable medium of claim 7, wherein the preselection cost is the target cost or an element of the target cost.

11. A method of generating a triphone preselection cost database for use in speech synthesis, the method comprising:

1) selecting a triphone sequence $u_1 - u_2 - u_3$;

2) calculating a preselection cost for each 5-phoneme sequence $u_a - u_1 - u_2 - u_3 - u_b$, where u_2 is allowed to match any identically labeled phoneme in a database and the units u_a and u_b vary over the entire phoneme universe; and

3) storing a group of the selected triphone sequences exhibiting the lowest costs in a triphone preselection cost database.

12. The method of generating a triphone preselection cost database of claim 11, wherein storing the group of selected sequences comprises:

a) determining a plurality of N least cost database units for the particular 5-phoneme context;

b) performing the union of the N least cost units for all combinations of u_a and u_b;

c) storing the union created in step 4) in a triphone preselection cost database; and

d) repeating steps 1) – 3) for each possible triphone sequence.

13. The method of generating a triphone preselection cost database of claim 11, the method for generating the database further comprising generating a key to index each triphone in the database.

14. The method of generating a triphone preselection cost database of claim 12, wherein a plurality of fifty least costs sequences for any possible 5-phone context are stored.

15. The method of generating a triphone preselection cost database of claim 11, wherein the preselection cost is the target cost or an element of the target cost.